

OPTICAL ROUTING USING STAR SWITCHING FABRIC
WITH REDUCED EFFECTIVE SWITCHING TIME

ABSTRACT

5 In one embodiment, a router includes a star switching fabric operable to receive a plurality of optical signals each having a wavelength and each associated with a payload received by the router and to communicate from the switching fabric a plurality of substantially similar sets of the optical signals. The router further includes a plurality of tunable filters 10 each having a configuration speed and each associated with a communication path coupled to one of a plurality of destination elements. Each filter is operable to receive one of the sets of optical signals from the switching fabric and to selectively tune to a wavelength of one of the plurality of optical signals received to facilitate communication of at least the payload associated with that optical signal toward the 15 destination element associated with that filter. The router also includes a plurality of line cards operable to facilitate generation of at least some of the optical signals for transmission to the star switching fabric. At least one of the plurality of line cards includes a 20 switching enhancer operable to increase the switching speed of the router without modifying the configuration speed of any of the tunable filters.

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